NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

2007-1405, -1406

GENLYTE THOMAS GROUP LLC,
Plaintiff-Cross Appellant,
v.
ARCH LIGHTING GROUP, INC.
(doing business as Architectural Lighting Systems),
Defendant-Appellant.

James R. Higgins, Jr., Middleton Reutlinger, of Louisville, Kentucky, argued for plaintiff-cross appellant. With him on the brief were James E. Milliman and Robert J. Theuerkauf.

Brett N. Dorny, Law Office of Brett N. Dorny, of Northborough, Massachusetts, argued for defendant-appellant.

Appealed from: United States District Court for the District of Massachusetts
Judge William G. Young

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

2007-1405, -1406

GENLYTE THOMAS GROUP LLC,
Plaintiff-Cross Appellant,
v.
ARCH LIGHTING GROUP, INC.
(doing business as Architectural Lighting Systems),
Defendant-Appellant.

Appeal from the United States District Court for the District of Massachusetts, case no. 05-CV-10945, Judge William G. Young.

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DECIDED: May 14, 2008

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Before BRYSON, Circuit Judge, CLEVENGER, Senior Circuit Judge, and DYK, Circuit Judge.

BRYSON, Circuit Judge.

Genlyte Thomas Group owns U.S. Patent No. 5,038,254 ("the '254 patent"), which relates to lighting systems for use in hospital rooms. In 2005, Genlyte sued Arch Lighting Group, Inc., ("ALS") for infringement of the '254 patent. Following a six-day trial, the jury returned a verdict that one of ALS's products literally infringed claim 1 of the '254 patent

and two other products infringed claims 1 and 3 of the patent under the doctrine of equivalents.

Claim 1 of the '254 patent reads as follows:

> 1. A medical lighting system comprising:
>
> a body;
>
> means for ceiling-mounting said body;
>
> a first light fixture within said body oriented to direct light downwardly to a selected reading area under said body; [and]
>
> a second light fixture within said body oriented to direct light downwardly and outwardly to a vertical wall surface outwardly adjacent from said body whereby light is reflected back to a broad area under said body.

Claim 3 is the same as claim 1 except that it adds the following limitation: "a third light fixture within said body oriented to direct light downwardly under said body to a selected patient examination area."

ALS has appealed from the district court's denial of its motions for judgment as a matter of law (JMOL) and for a new trial. Genlyte has cross-appealed from the district court's denial of its motion for relief from the judgment. We affirm.

I

A

ALS argues that JMOL should be granted because the jury verdict is not supported by substantial evidence. In particular, ALS contends that there is no evidence that its products contain structure for mounting the body of the lighting system to the ceiling that is the same as or equivalent to structure in the specification corresponding to the "means for ceiling-mounting" in claims 1 and 3.

ALS initially raised the issue of the proper construction of "means for ceiling- mounting" at the Markman hearing. During the hearing, ALS agreed with the court that resolution of that issue should be postponed until it filed its summary judgment motion. ALS, however, did not raise that issue in its summary judgment motion. In the Joint Pretrial Memorandum, ALS agreed that "the Court set forth the meaning of the claim terms in dispute during the June 20, 2005 Markman hearing," even though the court did not at that time construe the means for ceiling-mounting limitation. At trial, Dr. Ian Lewin, ALS's expert, conceded that the accused products satisfied the "means for ceiling-mounting" limitation. When asked whether his "opinion assumes and concedes the existence of all of the elements of claim 1 and 3, except the second light fixture," Dr. Lewin responded, "Yes." That statement acknowledged that the "means for ceiling- mounting" limitation was present in each of the accused products.

In addition to that evidence, Genlyte's expert, Thomas Lemons, testified that ALS's accused devices were all mounted to the ceiling by use of a lip or flange that rests on a T-bar ceiling grid like a conventional troffer. The patent described the invention as a "ceiling-mounted lighting system" in which the lighting fixtures are packaged in a two-foot by four-foot configuration so as to "replace a conventional troffer." '254 patent, col. 1, ll. 3-4; col. 3, ll. 12-14. Mr. Lemons testified that the reference to troffers would convey to a person of skill in the art the structure to be used to mount the light fixtures: "Every electrician would know, if you tell him you're going to install troffers he instantly knows that it's

going to be a hung ceiling and you fit the fixture up into it and set it down on the T bar." According to Mr. Lemons, the accused products all contained lips or flanges that enabled them to be installed on a grid ceiling. That evidence was sufficient to satisfy the "means for ceiling-mounting" limitation.

B

ALS also asserts that Genlyte did not prove that the accused products satisfied the first and second light fixture limitations. The essence of ALS's argument is that the first and second light fixtures must be oriented to direct light in different directions, with the first fixture aiming more light to a reading area and the second fixture aiming more light to a wall.

The trial court adopted the construction of the first and second fixture limitations set forth in ALS's proposed jury instructions. For the first light fixture, the trial court instructed the jury that the phrase "oriented to direct light downwardly to a selected reading area under said body" means "set or arranged to direct or aim more light in a downward direction than in an upward or outward direction to a reading area." For the second light fixture, the court instructed the jury that the phrase "oriented to direct light downwardly and outwardly to a vertical wall surface outwardly adjacent from said body" means "set or arranged to direct or aim more light in a downward and outward direction than in an upward direction to a wall." Without objection, the court did not require the jury to find that the first and second light fixtures had any specific orientation relative to one another. ALS did not press for a different construction of the first and second light fixture

limitations before the district court. Before us, counsel for ALS specifically disclaimed any argument that the jury instructions with regard to those limitations were incorrect. We therefore have no occasion to reach the question whether those instructions embodied a correct claim construction.

Under the court's claim construction, there is sufficient evidence that each of the accused devices satisfied the first and second light fixture limitations. As noted above, ALS's expert conceded that only the second light fixture was in dispute. ALS also stipulated that the first fixture "has the same light distribution pattern in every ALS MulTmed product" and that the first fixture in the ALS products "direct[s] light downwardly to a selected reading area under the fixture." Genlyte's expert, Mr. Lemons, testified about experiments he performed using ALS products that showed that the reading light in the ALS products directed a substantial amount of light to the reading area of the bed. Thus, even without the concession of ALS's expert, there is legally sufficient evidence from which the jury could find that the first light fixture was present in the accused devices.

ALS stipulated that each of the second light fixtures in its accused devices "has the same light distribution pattern in every ALS MulTmed product" and "does not produce any upwardly directed light." Given the unchallenged construction of the second fixture limitation as "set or arranged to direct or aim more light in a downward and outward direction than in an upward direction to a wall," the only question is whether the second light fixture in the accused devices directs light "in a downward and

outward direction . . . to a wall." Mr. Lemons testified that the second light fixture in the ALS devices directs light downwardly and outwardly to a wall. That testimony provided a legally sufficient basis for the jury to find that the claimed second light fixture was present in each of the accused devices.

C

ALS further asserts that upholding the jury's verdict of infringement under the doctrine of equivalents as to two of the accused products would eliminate a claim limitation. ALS's argument relies on the same premise as its challenge to the jury's verdict of literal infringement: that the first and second light fixtures must point in different directions. That argument fails for the same reasons that were given above, namely, that ALS requested and the court gave a claim construction that did not contain such a requirement. We therefore uphold the trial court's denial of JMOL as to both literal infringement and infringement under the doctrine of equivalents.

D

ALS next argues that it should be granted a new trial. First, ALS argues that the trial court improperly declined to instruct the jury as to the proper interpretation of the "means for ceiling-mounting" limitation. As noted above, ALS did not raise the issue of claim construction with respect to the "means for ceiling-mounting" limitation in the summary judgment proceedings (as the court directed), and its expert Dr. Lewis conceded that the "means for ceiling-mounting" limitation was satisfied. Based on the fact that ALS did not

challenge the court's instructions with respect to the "means for ceiling-mounting" limitation and that its expert conceded that limitation was satisfied in the accused devices, the trial court did not err by not giving ALS's requested "means- plus-function" instruction.

ALS also argues that a new trial should be granted because the jury verdict was against the weight of the evidence. In support of that contention, ALS again relies on its two previous arguments: that the accused products do not have a means for ceiling-mounting equivalent to the structure disclosed in the specification and that the claims require the two light fixtures to direct light in different directions. As noted above, ALS conceded that the means for ceiling-mounting limitation was satisfied in the accused products, and Genlyte's evidence supported the jury's finding on that issue. The evidence also supported the jury's finding that the second light fixture was in the accused products. The verdict was therefore not against the weight of the evidence, and district court did not err by refusing to grant a new trial.

II

Genlyte cross-appeals from the district court's denial of its motion under Fed. R. Civ. P. 60(b) fro relief from the judgment. As originally drafted, the judgment included paragraph 4, which would have required an accounting of infringing sales made between September 30, 2006, and the date of the judgment and would have required ALS to pay a royalty of $67 per infringing product on those sales. The trial court subsequently struck paragraph 4 from the judgment because it found that enforcing

paragraph 4 would result in a double counting of the award for the period covered by that paragraph. The court reasoned that although the sales accounting evidence presented to the jury covered only sales up to September 30, 2006, the jury was instructed to "figure out a reasonable royalty and then apply that royalty to the products that you think infringed over the time that you think they were infringing up to today." Based on that instruction, the court concluded that the jury's award of damages was "properly considered to address damages for reasonable royalties up to and including the trial."

Genlyte then moved under Rule 60(b) to amend the judgment to reinstate paragraph 4 because of asserted discovery misconduct by ALS. Genlyte alleged that ALS had improperly failed to update its sales figures after September 30, 2006. Genlyte argued that ALS had a duty to update its sales figures under Fed. R. Civ. P. 26(e) and under Genlyte's first set of interrogatories and requests for documents. In that document, Genlyte had stated that its requests "are deemed continuing" and that ALS should produce "any additional information requested which shall become available to ALS up to the time of trial pursuant to Rule 26(e) of the Federal Rules of Civil Procedure."

ALS disputes Genlyte's claim that it did not provide information about any of ALS's sales after September 30, 2006. ALS represented to the district court that Genlyte was given access to sales documents through November 30, 2006, and that those records reflected sales of 223 of the 412 products sold between September 30, 2006, and February 1, 2007. In addition, ALS represented that

substantially all of the remaining 189 products sold during that period were identified in "open order" documents produced by ALS at that time. In this court, Genlyte argues that providing access to sales documents was not sufficient to satisfy ALS's obligation to update its interrogatory answers. Genlyte does not point to anything in the record, however, to indicate that it objected to the form of ALS's production of materials, either prior to or during trial. Moreover, while the record contains an email message sent by Genlyte's counsel to ALS's counsel shortly before the end of the trial, asking for updated ALS sales records, the record does not reflect that Genlyte took any more formal steps to obtain additional materials from ALS pertaining to ALS's most recent sales.

Genlyte thus did not raise any issue of discovery misconduct before the trial court prior to the verdict, even though it was aware that ALS's prior production of sales data only included sales of the accused products through September 2006. Moreover, although Genlyte now contends that the form of production of sales information for the period following September 30, 2006, was inadequate, Genlyte apparently did not raise any issue of the sufficiency of ALS's production with the district court prior to or during trial. Under these circumstances, Genlyte should have raised its discovery complaints earlier if it wished either to obtain the records in question or have the court decide whether production was inadequate and sanctions should be imposed for nonproduction. See Colon-Millin v. Sears Roebuck de Puerto Rico, Inc., 455 F.3d 30, 39 (1st Cir. 2006). For that reason and for the reasons given by the

district court, we uphold the district court's denial of Genlyte's motion to reinstate the award of damages in paragraph 4 of the original judgment.

Each party shall bear its own costs for this appeal.

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

| | |
|---|---|
| GENLYTE THOMAS GROUP LLC,<br>Plaintiff,<br>v.<br>ARCH LIGHTING GROUP, INC. d/b/a ARCHITECTUARL LIGHTING SYSTEMS<br>Defendant. | Civil Action No. 05-CV-10945- WGY |

**[PLAINTIFF'S PROPOSED] FINAL JUDGMENT AND PERMANENT INJUNCTION FOLLOWING TRIAL TO JURY AND VERDICT**

Trial having been held before a jury and concluded on February 1, 2007, the parties having been heard and the jury having returned its verdict that Defendant Arch Lighting Group Inc. d/b/a Architectural Lighting Systems ("ALS") infringed the patent-in-suit, U.S. Patent No. 5,038,254 ("the '254 Patent") as follows:

1. ALS' MulTmed 2x4 product MT2A infringed Claim 1 and 3 of the '254 Patent under the doctrine of equivalents;

2. ALS' MulTmed 2x4 product MT2B infringed Claim 1 and 3 of the '254 Patent under the doctrine of equivalents;

3. ALS' MulTmed 2x2 product MT1D literally infringed Claim 1 of the '254 Patent; and

4. That the amount of damages suffered by Genlyte as a result of such infringement was $207,554.00.

The jury having returned its verdict and other determinations having been made during the course of this case, the Court having considered the entire Record of this cause and having heard argument of counsel and being sufficiently advised,

It is ORDERED AND ADJUDGED,

1. That U.S. Patent No. 5,038,254 is not invalid and is not unenforceable;

2. That Defendant, ALS, be and hereby is adjudicated as liable for infringement of the '254 Patent, as found by the Jury

3. That Genlyte shall recover of and from Defendant, ALS, the sum of $207,554.00 plus pre-judgment interest on said sum in the amount of $30,089 as set forth in Paragraph 12 of the Affidavit of Michael Tate dated February 5, 2007 filed contemporaneously herewith;

4. That within 30 days of the date of entry hereof ALS provide a certified accounting to Genlyte of all sales of MT2A, MT2B and MT1D MulTmed hospital patient room lights from September 30, 2006 to the date hereof, and with such accounting ALS shall pay to Genlyte as additional damages the sum of $67.00 per product sold.

5. That ALS, its officers, directors, employees, agents and attorneys, and all persons acting in concert with any of them, are permanently enjoined and prohibited from making, using, selling, offering for sale or importing into the United States the patented inventions recited in Claim 1 and Claim 3

of the '254 Patent, and from active inducement of infringement of these claims of the '254 Patent.

6. That the injunction set forth in Paragraph 5 shall include the mandatory injunction and requirement that ALS forthwith cease and desist from

[a] making or selling or offering to sell in any fashion the following products, MT2A (2x4 product with reading, ambient and examination lights), MT2B (2x4 product with reading, ambient, examination lights and nurse's night light) and MT1D (2x2 product with reading and ambient lights) or any product having structure similar thereto which would infringe Claim 1 or Claim 3 of the '254 Patent;

[b] providing or offering to provide the Brochure denominated as Exhibit 20 during trial of this cause, which Brochure/Exhibit 20 includes depictions and/or descriptions of the MulTmed 2x4 and certain 2x2 products;

[c] maintaining on its website the PowerPoint presentation set forth in Exhibit 21 during trial of this cause

[d] advertising in any manner the MT2A, MT2B or MT1D products as being available for sale or use or import into the United States; and

[e] modifying any other product including but not limited to the ALS Latitude patient bed light (the present structure of which was depicted in Exhibit 34 at trial of this cause) to contain any structure that would infringe Claim 1 or Claim 3 of the '254 Patent.

7. That the injunction set forth in Paragraph 5 shall further include the mandatory injunction and requirement that ALS [a] gather up and destroy all

inventory of MT2A MulTmed 2x4 products, MT2B 2x4 products and MT1D 2x2 products, and certify such destruction to the Court and to Genlyte within thirty (30) days of the date of entry of this Judgment; [b] inform in writing all sales representative of ALS who in any way represent ALS in selling or offering for sale ALS' MT2A, MT2B or MT1D MulTmed products that such products have been permanently enjoined and are no longer available for sale or use in a hospital patient room or in any other environment, and certify such efforts to the Court and to Genlyte within thirty (30) days of the entry hereof; and [c] ~~notify in writing all specifiers, architects,, engineers or other hospital administrators or employees who determine or recommend the selection of hospital patient room lights that the ALS' MT2A, MT2B and MT1D MulTmed products are no longer available for sale or use in a hospital patient room or in any other environment, and certify such efforts to the Court and Genlte within thirty (30) days of the date hereof.~~ s/WGY

8. The provisions of Paragraphs 5, 6 and 7 hereof do not apply to sales and installation of ALS' MT2A, MT2B and MT1D MulTmed products for which there is a legally enforceable contract for ALS to provide such products as of the date of entry of this Judgment. As to such legally enforceable contracts, ALS may fulfill same and receive payment therefore, provided that ALS pays to Genlyte, in addition to the amounts set forth in Paragraph 3 hereof, a royalty in the amount of $67.00 per product sold within thirty (30) days from the date ALS receives payment. Every thirty (30) days after entry hereof, ALS shall report to Genlyte the number of such sales and at



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that time remit to Genlyte the amount of royalty payments required to be paid. When ALS has completed its sales of all MT2A, MT2B and MT1D MulTmed products permitted under this Paragraph, ALS shall certify in writing to the Court and to Genlyte that all such sales have been completed and all such payments to Genlyte have been made.

9. The injunction portions hereof may be removed upon submission of a Joint Motion for Removal of Permanent Injunction executed by the parties.

10. This is a final and appealable Order, on which execution may be had according to the Federal Rules of Civil Procedure and the various statutes of the United States and the laws of Massachusetts.

SO ORDERED AND ADJUGED this 5th day of February, 2007.

s/ William G. Young
William G. Young,
U.S. District Judge

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

Civil Action No. 05-CV-10945- WGY

GENLYTE THOMAS GROUP LLC, Plaintiff, v.
ARCH LIGHTING GROUP, INC., Defendant.

03/39/2007
Electronic Clerk's Notes for proceedings held before Judge William G. Young: Plaintiff's counsel Higgins and Defendant's counsel Dorny are present in the courtroom. Motion Hearing held on 3/29/2007 re: 81 Motion for Judgment as a Matter of Law, to Alter Judgment, and/or For a New Trial filed by Architectural Lighting Systems. After hearing the Motion for New Trial id Denied. The Motion for Judgment as a matter of law is Denied except as to the amendment of the judgment. That is UNDER ADVISEMENT. The Court will hold off ruling on this portion of the motion for 2 weeks to give the parties time to resolve the issue. (Court Reporter Womack.) (Smith, Bonnie) (Entered 03/30/2007)

35 U.S.C. §112, ¶6

**An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.**

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

| | |
|---|---|
| GENLYTE THOMAS GROUP LLC,<br>Plaintiff,<br>v.<br>ARCH LIGHTING GROUP, INC. d/b/a ARCHITECTUARL LIGHTING SYSTEMS<br>Defendant. | Civil Action No. 05-CV-10945- WGY |

JURY VERDICT

Upon the matters submitted to us, we find:

1. ___ for ALS
2. X for Genlyte because, as to:
   a. Claim 1

| | Literal Infringement? | Doctrine of Equivalents? | Inducement? |
|---|---|---|---|
| MT2A (2x4 product) | | X | |
| MT2B (2x4 product w/ nurse's night light | | X | |
| MT1D (2x2 product) | X | | |
| MT1E (2x2 product) | | | |
| Latitude | | | |

b. Claim 3

| | Literal Infringement? | Doctrine of Equivalents? | Inducement? |
|---|---|---|---|
| MT2A (2x4 product) | | X | |
| MT2B (2x4 product w/ nurse's night light | | X | |

c. We assess damages of $207,554.00

d. Was the patent infringement wilful?
X no __ yes

/s Katherine M. Alves
Forelady

Date: Feb. 1, 2007

# United States Patent [19]

**Fabbri et al.**

[11] **Patent Number: 5,038,254**

[45] **Date of Patent: Aug. 6, 1991**


[54] **INTEGRATED MEDICAL LIGHT SYSTEM**


[75] Inventors: William C. Fabbri, Billerica; Roy Crane, Wilmington, both of Mass.

[73] Assignee: Keene Corporation, Union, N.J.



[21] Appl. No.: 629,436

[22] Filed: Dec. 18, 1990

[51] Int. Cl.[5] ..... F21V 13/00

[52] U.S. Cl. ..... 362/33; 362/225; 362/147; 362/804

[58] Field of Search ..... 362/33, 225, 240, 364, 362/147, 804



[56] **References Cited**

U.S. PATENT DOCUMENTS

3,928,757 12/1975 Nelson ..... 362/804 X

4,204,274 5/1980 Luidentz ..... 362/223 X



*Primary Examiner*—Stephen F. Husar

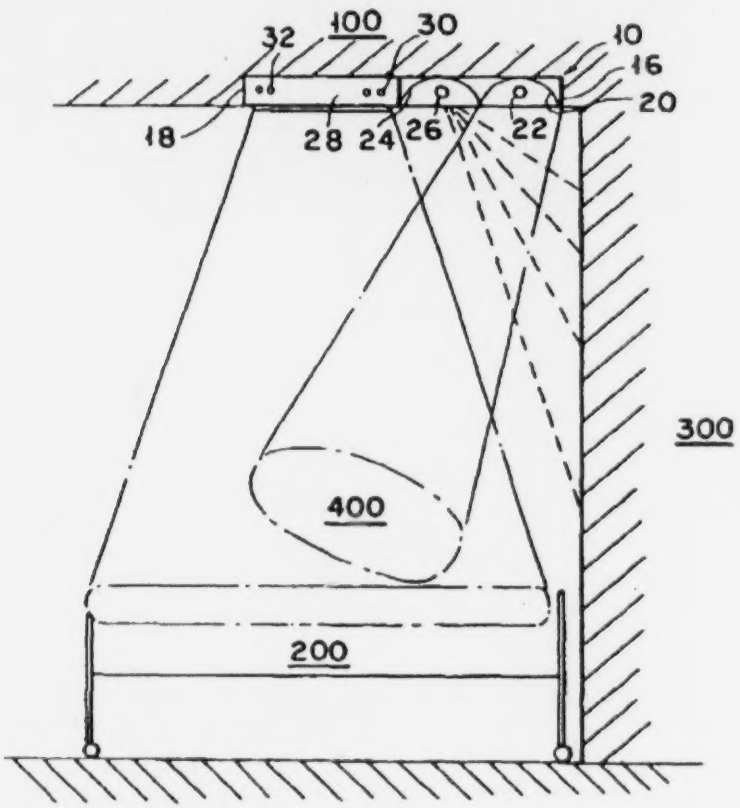
*Attorney, Agent, or Firm*—Kane, Dalsimer, Sullivan, Kurucz, Levy, Eisele and Richard



[57] **ABSTRACT**

The apparatus is a medical lighting system which includes a ceiling-mount reading light, examination light and ambient light. The reading light is directed toward a selected reading area on a hospital bed directly below the medical lighting system. The examination light illuminates the entire top surface of the hospital bed. The ambient light directs light to a wall abutting the head of the hospital bed thereby providing reflected light to the vicinity of the hospital bed.


**14 Claims, 2 Drawing Sheets**



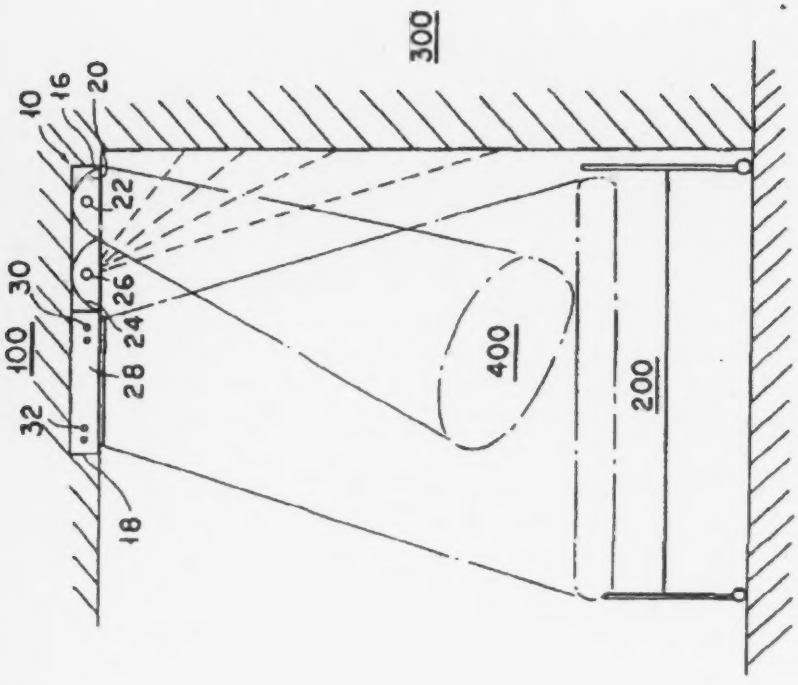



FIG. 1

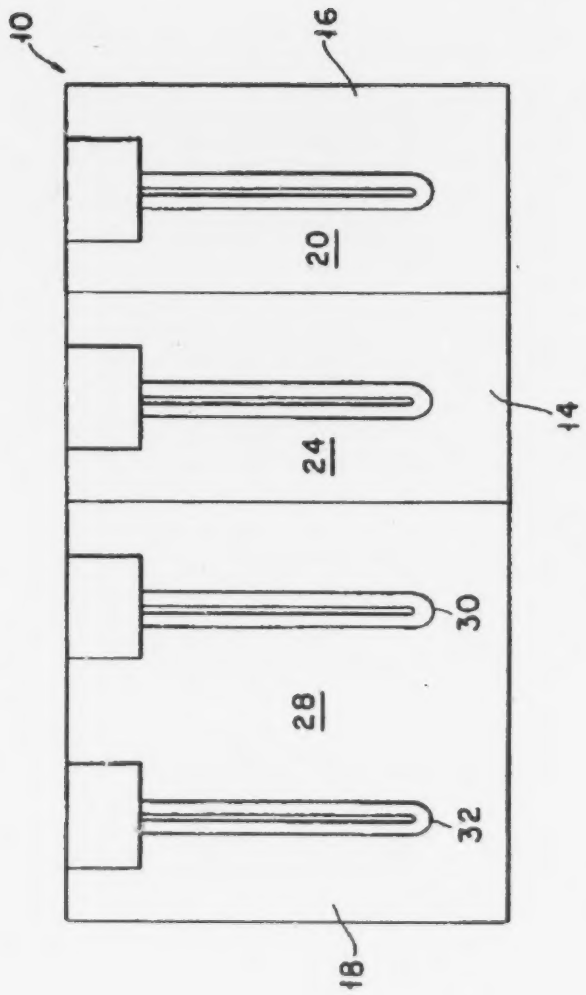



FIG. 2

# INTEGRATED MEDICAL LIGHT SYSTEM

## BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention pertains to a light system for use in hospitals and health facilities. The light system includes an examination light, an ambient light, and a reading light and is preferably mounted in the ceiling.

2. Description of the Prior Art

In hospitals and similar health or medical facilities, it is desirable to provide the bedridden patient with three types of lights—the first is an ambient light which provides background, preferably reflected, light to a large area surrounding the bed; the second is a reading light which provides direct light to a portion of the patient's bed; and the third is an examination light which directs a high intensity light to substantially the entire area of the patient's bed. The ambient light typically has an illumination value of approximately 50 foot-candles while the reading light typically has an illumination value of approximately 70 foot-candles and the examination light typically has an illumination value of approximately 100 foot-candles.

In the prior art, these lights were typically provided individually in a haphazard way. Different types of lamps and light fixtures were placed around the bed with numerous plugs competing with medical equipment for available outlet space. Moreover, such an arrangement was unsightly and could impede the mobility of the patient, the patient's bed, or the surrounding medical equipment.

Wall-mounted fixtures alleviated some of the above-identified deficiencies, but still left much to be desired aesthetically and, more importantly, could impede access to the patient, and were easily damaged by motor driven bed headboards.

## OBJECTS AND SUMMARY OF THE INVENTION

It is therefore an object of this invention to provide an integrated medical lighting system which provides an ambient light with an illumination value of about 50 foot-candles over a wide area, a reading light with an illumination value of about 70 foot-candles over an area appropriate for a patient reading in bed; and an examination light with an illumination value of about 100 foot-candles over the entire area of the patient's bed.

It is therefore a further object of this invention to provide an integrated medical lighting system which requires no more than one or two electrical connections.

It is therefore a still further object of this invention to provide an integrated medical lighting system which does not impede access to the patient, the patient's bed, or surrounding medical equipment.

It is therefore a final object of this invention to provide an integrated medical lighting system which is aesthetically pleasing.

These and other objects are effectively attained by providing a ceiling-mounted medical lighting system which includes three individual dedicated light fixtures. The lighting system is rectangular and is designed to be placed so that one of the shorter ends of the rectangle is placed substantially on the ceiling-wall interface directly over the head of the patient's bed. The bed is placed so that the longer sides of the bed are parallel to the longer sides of the rectangular light fixture.

A first light fixture includes a fluorescent bulb and a reflector designed to direct light toward the forward portion of the patient's bed so as to allow a patient to read comfortably. A second light fixture includes a fluorescent bulb and a reflector designed to direct light toward a vertical wall abutting the head of the patient's bed so as to provide a reflected light over a large area around the patient's bed. A third light fixture includes two to four fluorescent (preferably biax® or other U-shaped) bulbs which are oriented perpendicularly to the bed. The fluorescent bulbs have a light distribution pattern which is substantially oriented in the direction perpendicular to the bulb. Therefore, the entire area of the bed is efficiently illuminated providing an examination light.

## BRIEF DESCRIPTION OF THE DRAWINGS

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

FIG. 1 is a side plan view of the integrated medical light system of the present invention.

FIG. 2 is a bottom plan view of the integrated medical light system of the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail wherein like numerals indicate like elements throughout the several views, FIG. 1 is a side plan view of lighting fixture 10 shown installed in ceiling 100 directly over bed 200. FIG. 2 shows the rectangular shape of lighting fixture 10 formed by long sides 12, 14 and short sides 16, 18. Long sides 12, 14 are typically four feet in length while short sides 16, 18 are typically two feet in length. As shown in FIG. 1, short side 16 abuts the wall-ceiling (300, 100, respectively) interface directly over the head of bed 200. Long sides 12, 14 are parallel to the longer side of bed 200.

Reading light reflector 20 is along short side 16 of lighting fixture 10 proximate to wall 300 and includes a fluorescent bulb 22 positioned therewithin parallel to short sides 16, 18 of lighting fixture 10 so as to provide a direct light to reading area 400 of bed 200 as shown on FIG. 1. Reflector 20 and bulb 22 are chosen to provide an illumination of approximately 70 foot-candles to reading are 400.

Ambient light reflector 24 is inwardly adjacent to reading light reflector 20 and includes a fluorescent bulb 26 positioned therewithin parallel to short sides 16, 18 of lighting fixture 10 so as to reflect or bounce light from wall 300 thereby providing ambient light to bed 200. Reflector 24 and bulb 26 are chosen to provide approximately 50 foot-candles of illumination to the ambient area.

Reflectors 20, 24 and bulbs 22, 26 are configured so as not to direct glare toward the head of bed 200 where the patient's head is likely to be, whether in a supine or sitting position. Similarly, reflectors 20, 24 and bulbs 22, 26 are configured so as not to direct glare to areas adjacent to bed 200 so as to allow other beds (not shown) to be placed proximate thereto without undue disturbance of neighboring patients.

Examination light reflector 28 is outwardly adjacent to ambient light reflector 24, includes short side 18 and is opposite from reading light reflector 20. Examination

light reflector 28 includes two to four fluorescent bulbs 30, 32. Fluorescent bulbs 30, 32 (preferably biax ® or other U-shaped) are parallel to short sides 16, 18 of lighting fixture 10. As fluorescent bulbs 30, 32 have a characteristic directional light distribution pattern oriented in the direction perpendicular to the bulbs, the entire area of the bed 200 is efficiently illuminated The bulbs 30, 32 and reflector 28 are chosen to provide 100 foot-candles of illumination to the bed 200. An important feature of the present invention resides in the orientation of the lamps within the lighting 1 fixture which permits the lighting fixture 10 to be packaged in a two foot by four foot configuration and thereby replace a conventional troffer.

Bulbs 22, 26, 30 and 32 are powered by a single electrical source, preferably supplied from wiring within ceiling 100 although the use of a single electric cord (not shown) engaging an electrical socket (not shown) may be used. A single switch module (not shown), either hand-held or built into wall 300, is used to control bulbs 22 and 26 and a wall switch to control bulbs 30 and 32

To use this device, the patient operates the switch module (not shown) to operate selectively bulbs 22 and 26. Medical personnel control bulbs 30 and 32 of the examination lighting from a switch on the headwall, not easily accessible to the patient.

Thus the several aforementioned objects and advantages are most effectively attained. Although a single preferred embodiment of the invention has been disclosed and described in detail herein, it should be understood that this invention is in no sense limited thereby and its scope is to be determined by that of the appended claims.

What is claimed is:

1. A medical lighting system comprising:

a body;

means for ceiling-mounting said body;

a first light fixture within said body oriented to direct light downwardly to a selected reading area under said body;

a second light fixture within said body oriented to direct light downwardly and outwardly to a vertical wall surface outwardly adjacent from said body whereby light is reflected back to a broad area under said body.

2. The medical lighting system of claim 1 wherein said first light fixture includes a first reflector and a first fluorescent bulb therewithin; and said second light fixture includes a second reflector and a second fluorescent bulb therewithin.

3. A medical lighting system comprising:

a body;

means for ceiling-mounting said body;

a first light fixture within said body oriented to direct light downwardly to a selected reading area under said body;

a second light fixture within said body oriented to direct light downwardly and outwardly to a vertical wall surface outwardly adjacent from said body whereby light is reflected back to a broad area under said body;

a third light fixture within said body oriented to direct light downwardly under said body to a selected patient examination area.

4. The medical lighting system of claim 3 wherein said first light fixture includes a first reflector and a first fluorescent bulb therewithin; said second light fixture includes a second reflector and a second fluorescent bulb therewithin; and said third light fixture includes a third reflector and a fluorescent assembly therewithin.

5. The medical lighting system of claim 4 wherein said fluorescent assembly includes at least one fluorescent bulb with a light distribution pattern oriented in a direction perpendicular to said at least one fluorescent bulb.

6 The medical lighting system of claim 5 wherein said at least one fluorescent bulb is a "biax"-type bulb.

7. The medical lighting system of claim 5 wherein said fluorescent assembly includes at least two fluorescent bulbs with a light distribution pattern oriented in a direction perpendicular to said at least two fluorescent bulbs.

8. The medical lighting system of claim 7 wherein said at least two fluorescent bulbs are "biax"-type bulbs.

9. The medical lighting system of claim 5 wherein said body is rectangular and a first shorter and of said body is designed to abut the vertical wall surface; wherein said first fluorescent light fixture abuts said first shorter end and said first fluorescent light bulb is parallel to said first shorter end, wherein said second fluorescent light fixture is inwardly adjacent to said first fluorescent light fixture and said second fluorescent light fixture is parallel to first shorter end; and wherein said third fluorescent light fixture is outwardly adjacent from said second fluorescent light fixture and abuts a second shorter end of said body; and wherein said at least one fluorescent bulb is parallel to said first shorter end.

10. The medical lighting system of claim 9 wherein said first and second shorter ends are substantially two feet in length and said body includes first and second longer ends which are substantially four feet in length.

11. The medical lighting system of claim 9 wherein said first light fixture illuminates said selected reading area to substantially 70 foot-candles; wherein said second light fixture illuminates said broad area to substantially 30 foot-candles; and wherein said third light fixture illuminates said patient examination area to substantially 100 foot-candles.

12. The medical lighting system of claim 11 wherein said patient examination area is sufficient in size to include a standard hospital bed when said first light fixture is substantially directly over a head of the standard hospital bed, the head of the standard hospital bed substantially abutting the vertical wall surface.

13 The medical lighting system of claim 3 wherein a distribution of light from said first and second light fixtures excludes glare from being directed to a forward area of a standard hospital bed placed below the medical lighting system.

14. The medical lighting system of claim 3 wherein a distribution of light from said first and second light fixtures excludes glare from areas adjacent to a standard hospital bed placed below the medical lighting system.

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